NOTE IX.

LAELAPS VERSTEEGII, A NEW SPECIES OF PARASITIC MITE

DESCRIBED BY

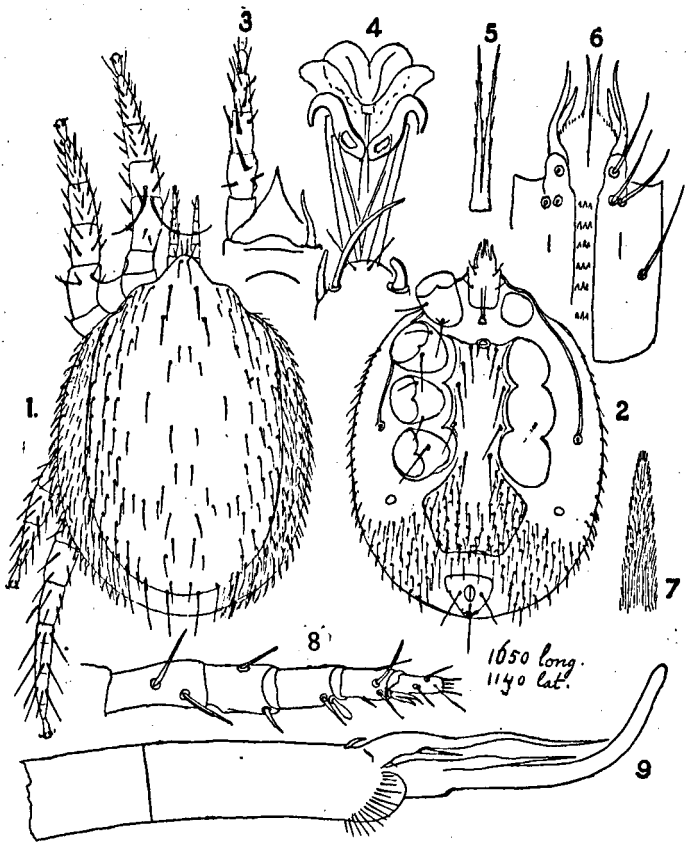
Dr. A. C. OUDEMANS.

(With 15 figures).

Male. *Length* 1650, width 1140 μ. — *Colour* pale; dorsal shield straw-coloured. — *Shape* like that of *Laelaps agilis* C. L. Koch, broad-oval, top forward, with a slightly indicated shoulder above legs I and II. — *Texture* scaly in the shields; finely wrinkled in the weak skin.

Dorsal side (fig. 1) protected by one shield, long 1530, wide 910 μ, so that a wide margin of weak skin surrounds the shield from the shoulder backwards, and posteriorly. Anteriorly the shield shows the same shoulders above legs I as the body, and less developed shoulders above legs II. The side-edges of the shield are slightly rounded, the posterior edge well rounded. *Hairs.* The hairs are bristles of two kinds; there are longer and finer ones on the shield, and very short (comparatively thicker) ones in the weak skin. In general the length of the bristles on the shield is equal to the width of femur I or II. Four stronger ones are visible on the anterior fourth part of the shield, and six longer ones are planted in the posterior edge of the shield. The number of the hairs is normal in the median third part of the shield, abnormal (more numerous) in the lateral third parts of the shield, where they are arranged in oblique rows of about three to six hairs each. In the anterior third part of the shield these oblique rows run from the edge of the shield inward and forward; in the remaining part they run from the edge of the shield

inward and backward. The weak skin (except a portion behind the shield, limited by the 6 long hairs which are planted in the posterior edge of the shield) is densely hairy; the hairs are here minute bristles. Four small vertical hairs are directed forward.



Ventral side (fig. 2). *Tritosternum* (fig. 5) with very small trapezoidal basal piece or trunk, and very long flat laciniae, which are in fact prolongations of the trunk as they do not show any demarcation or less chitinisation. The laciniae are provided with very few (about 4) beards or hairs on each side. — *Sternal*, *metasternal*, *genital*, *ventral* and inner sides of *pedal shields* fused. Yet the demarcation

between inner pedal shields and sterno-metasterno-genital portion is discernible. Ventral portion pentangular, imaginary top forward. *Anal shield* triangular, top backward, with slightly convex sides, rounded angles and small cribrum. *Inguinal shields* minute, round. No *peritrematic shields*. No outer *pedal* shields; also the parts between coxae II and III and between III and IV are wanting, so that the three foveolae pedales II, III and IV form together one large hole. *Hairs*. Three sternal pairs of long bristles of which the first pair close to the *genital aperture*; one metasternal pair of ditto in the angles between coxae III and IV; one genital pair of ditto between coxae IV. Ventral shield densely set with minute bristles, except in a square median portion which may be considered as a ventral prolongation of the genital part; the bristles are arranged in rows two of which are parallel to the sides of the shield; the remaining hairs in more or less transverse rows. Anal shield with the usual 3 hairs, which are long. Moreover behind the ventral shield a transverse row of 4 bristles; towards the sides of this shield about 8 rows of about 7 bristles each, running from the shield outward and backward, and a row of minute bristles close to the edge of the body, extending from the shoulders backward to the anal shield. A bare space surrounds this shield.

Epistome (fig. 3). The forward curved line (posteriorly in my figure) represents the posterior limit of the capitulum, where it is attached to the weak skin of the underside of the prosoma. The dorsal side of the capitulum does not show demarcations of the coxal parts of the palpi and the real epistoma. This latter is provided anteriorly with a straight transverse fine ridge, before which there is a forward curved transverse fine line uniting the distal ends of the two coxal parts of the palpi. And before this line one observes the triangular transparent piece, generally called the epistoma; the point of the triangle reaches beyond the middle of the femur of the palp; proximally the triangle is spread even over the trochanters of the palp!

The *styli* were quite invisible, but on pressing the capitulum they make their appearance (fig. 3, to the right) as strong, slightly S-curved, proximally wide and flat ones, and hidden *under the mandibles!*

Mandibles (fig. 9). Short, not longer than the capitulum. Trochanterofemur short, once and a half longer than wide. Tibiotarsale long; its whole length about six times its width; its pars tibialis about three times its width; its pars basitarsalis (upper jaw of chela) of the same length, but stylet-shaped, distinctly articulate with the pars tibialis, and most probably movable, though not much. Distally and dorsally the pars tibialis bears the usual tibial sense-organ, and ventrally a transparent bladder before the pulvillus. *Chelae.* The upper jaw, as already quoted above, stylet-shaped, somewhat wavy or undulated, without any teeth; yet at the end of its first fourth part provided with a transparent pin, with which it is articulated, which most probably is movable, and which I consider as an enormously developed tarsal sense-organ. (As is known this sense-organ in normal chelae stands between the incisors and the canines). Lower jaw likewise stylet-shaped, a little smaller than the upper-jaw, and configurated as the same, proportionally much narrower. Copulation organ well chitinized, somewhat flat, distally more rod-like, configurated more or less as a turkish sable or as a skate, proximally fused with the proximal half of the stylet-shaped lower jaw.

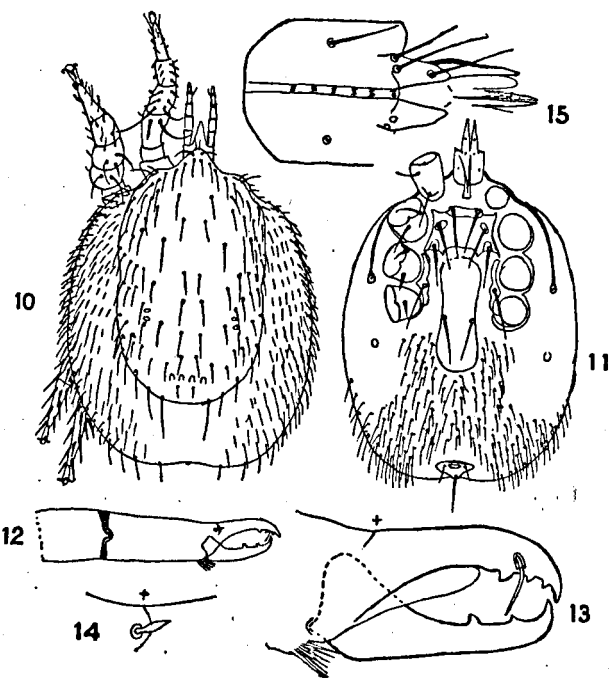
Maxillae. The underside of the capitulum (fig. 6) distinctly shows demarcations of the coxal parts of the palpi and a median narrow streak which simulates an underlip or real hypostome. In this streak one observes six transverse rows of three minute triangular thorn-like appendages. Anteriorly this streak gradually grows wider and gently passes in the inner malae, which are transparent blades with rounded and finely franged edge and inner long slips (each mala having one slip). The coxal parts of the palpi bear the usual 4 hairs each on the

usual places; the part which bears hairs I, II and III is stronger chitinized, projects a little beyond the distal end of the coxa (where the free palp is implanted) and bears the long slender horn, which is more or less S-shaped so that with its congener it similates a lyre. One observes moreover inward of the horns the styli which are situated so close to the horns, that I at first thought they were bifid. *Palpi* long and slender, each joint beyond the femur diminishing in width, and all the joints diminishing in length. Dorsally (fig. 3) the trochanter is bare; the femur provided with 3 bristles; the genu with 4; the tibia with 6, 2 of which quite distally; the tarsus bare; it bears however at its top 4 transparent hairs, of which the two inward smaller. Ventrally (fig. 8) the trochanter with the usual 2 bristles; the femur with the usual 2 hairs of which the outer one in the middle of its length is a bristle, the inner one quite distally is again a bristle (not a knife); the genu with the usual 2 hairs inward and distally, close together, of which the hinder one is a bristle (not a knife) and the distal one a club-shaped flat hair (a folding-stick, not a knife). The tibia with 4 hairs (not 2) of which the 2 usual distal ones are bristles, the outer ones strong hairs. Tarsus with the usual inner and proximal bifid fork, moreover with only 2 bristles, and a distal very fine hair. At its top it bears the 4 hairs already quoted of above.

Legs (figs. 2 and 1) short, resp. about 1225, 1155, 1050 and 1400 μ long. Fore-legs rather thick; hind-legs rather slender. The coxae of the legs ventrally (fig. 2) with the usual 2, 2, 2, and 1 hairs respectively. The joints of the legs are provided with bristles of the usual number and situation, two dorsal and two lateral rows. Noticeable are only: Femur I with a distal long bristle, which is directed backward and curved inward over the palpi, and cross its congener. Genu I proximally with a similar bristle but curved outward. Femur II distally with two similar but smaller bristles, of which one curved inward, and one outward. Tarsus II (fig. 4) distally with two small thick

thorns a little curved toward the praetarsus and a longer thorn curved over the praetarsus. Praetarsus II (of the two specimens examined by me the praetarsus IV were not spread out) (fig. 4) with a four-lobed supra-unguinal sticking piece; claws strong, more or less S-shaped and proximally provided with a hole (or less chitinized spot?).

Female. *Length*, measured 12 specimens, 1800—2070 μ, width 1260—1590 μ. — *Colour* and *texture* like in the male. — *Shape*, when virginal, like in the male; when pregnant, comparatively very wide and rounded; yet the shoulders above legs I and II are distinct; the posterior edge of the body a little concave, and here quite in the median line a minute part of the anal shield is discernible.



Dorsal side (fig. 10) protected by one shield, the length of which, measured 12 specimens, is 1650—1710 μ, and the width 960—990 μ. The anterior edge of the shield is sinuated and follows exactly the outline of the

body with the first pair of shoulders. The lateral edges are almost parallel, only slightly constricted in the middle; posteriorly very regularly rounded. The anterior part of the shield is very dark brown, the anterior two thirds of the median streak is light brown, and provided with darker markings, whilst the posterior third part of the same streak, and the two lateral streaks, are darker brown, and provided with lighter markings; I have delineated on purpose 8 very light and striking spots, viz. two on each side and four posteriorly. *Hairs*: two pairs of vertical hairs, of which the second pair directed outward. Two hairs on the shoulders I, directed outward. Anteriorly a nearly uninterrupted row of hairs almost following the anterior edge. The median streak with the usual number and position of hairs. Quite on the posterior edge a pair of long hairs. The lateral streaks with much more hairs, standing in oblique rows, which in the anterior portion run backward and outward and in the posterior portion forward and outward. Weak skin with numerous small bristles, arranged in rows which run forward and outward. A median streak behind the shield quite hairless.

Ventral side. Tritosternum like in the male (see fig. 5). *Sternal shield* (fig. 11) trapezoidal, darkbrown; anteriorly with a light-coloured transverse oblong projecting piece on which the first pair of long sternal bristles is planted. Lateral edges a little concave. Posterior edges with three concavities. The second and third pair of sternal long bristles are planted in lighter-coloured spots. *Genital shield* dumbbell-shaped, light-coloured, only with its own pair of long bristles. *Metasternal shields* apparently absent, at least the metasternal bristles are planted in a chitinous bar which more resembles a portion of the *pedal shields*. These latter are only discernible outside of the foveolae pedales. *Anal shield* perfectly of the same shape as in the male (see fig. 2); in pregnant females (fig. 11) it seems configurated otherwise, when observed in an oblique direction. *Inguinal shields* small, round. *Peritrematic shields* absent. *Peritremata* like

in the male. There is *no ventral shield* (compare fig. 11 with fig. 2), but the hairs which stand on the male ventral shield are present. The hairs on the venter are not less in number (compared with the male), and occupy the same area, but are placed less regular.

Epistome like in the male; the dorsal part of the capitulum, however, is somewhat longer than in the male. Anterior transparent portion like in the male (see fig. 3).

Mandibles (fig. 12) short, twice longer than the capitulum; trochanterofemur short; tibiotarsale three times longer and articulated with trochanterofemur with a condylus in the middle of the inner side. *Chelae* (fig. 13) short and strong, as long as the trochanterofemur (fig. 12), with demarcation between pars tibialis and pars basitarsalis (fig. 13 +). Curious is the fact, that the tibial sense-hair is not situated on the outside, nor on the dorsal side, but on the inner side (fig. 12). It is lancet-shaped (fig. 14). Upper jaw (pars basitarsalis) (fig. 13) with 3 canines, of which the two hinder ones are small and triangular; very long sense-hair, planted in a little thimble-shaped pit; small triangular canine, somewhat directed backward, and transparent blade like molar, which is rounded anteriorly. Lower jaw (telotarsus) with two incisors, of which the hinder one is small and triangular, and a small triangular canine, somewhat directed backward; no molar. Pulvillus: a row of about 10 transparent hairs.

Maxillae. Underside of capitulum (fig. 15) with median depression, in which six transverse rows of three minute triangular pins each; with the usual 4 pairs of hairs; with pedunculate horns; peduncles wide, triangular; hairs I far forward; hairs II and III on the base of the peduncle; horns strong, dark; inner malae divided into two slips; inner slip long, lingua-shaped, with extremely minute hairs and fringe; outer slip transparent, anteriorly rounded. Lingua like in the male (see fig. 7). *Palpi* like in the male (see figs. 3 and 8).

Legs (fig. 10) like in the male. Tarsus II ventrally with strong thorns. Praetarsus II like in the male.

Habitat parasitical on a *Mus sp.*

Patria: Surinam.

Collected by Mr. G. Versteeg near the Wilhelmina-River, 16 September 1903, during the Gonini-Expedition, and presented to the Leyden Museum.

Arnhem, June 1904.